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AGO D/A ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY
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IN REPLY REFER TO

AGAM-P (M) (21 Nov 68) FOR OT UT 683150

25 November 1968

SUBJECT: Operational Report - Lessons Learned, Headquarters, 73d
Signal Battalion (Spt), Period Ending 31 July 1968

SEE DISTRIBUTION

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2. Information contained in this report is provided to insure that the Army realizes current benefits from lessons learned during recent operations.
3. To insure that the information provided through the Lessons Learned Program is readily available on a continuous basis, a cumulative Lessons Learned Index containing alphabetical listings of items appearing in the reports is compiled and distributed periodically. Recipients of the attached report are encouraged to recommend items from it for inclusion in the Index by completing and returning the self-addressed form provided at the end of this report.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham

KENNETH G. WICKHAM
Major General, USA
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73d Signal Battalion (Spt)

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DEPARTMENT OF THE ARMY
HEADQUARTERS, 73RD SIGNAL BATTALION (SPT)
APO US Forces 96312

SCCPV-NG-SS-OP

10 August 1968

SUBJECT: Operational Report of 73rd Signal Battalion (Snt) for Period
Ending 31 July 1968, RCS CSFOP-65 (P1)

See Distribution

1. Section 1, Operations: Significant Activities:

a. General:

(1) The mission of the battalion is "To direct and coordinate operations of a signal battalion consisting of two (2) to seven (7) signal companies providing VHF and microwave communications encompassing five (5) political provinces of Ninh Thuan, Binh Thuan, Lam Dong, Quang Duc, Tuyen Duc and that portion of Khanh Hoa province south of the city of Nha Trang. The 73rd Signal Battalion (Snt) additionally provides tropospheric communications in the II CTZ, the facilities with which the battalion commander controls the battalion, consolidated administration, supplemental supply, motor, and signal maintenance for the battalion."

(2) LTC Owen J. Driver, Jr., assumed command of the 73rd Signal Battalion (Snt) on 3 May 1968. Shortly thereafter, on 17 May 1968, Major Maynard E. Hilton assumed command of the 362nd Signal Company (Tropo). Lt Knowles assumed command of Company D, 36th Signal Battalion on 13 May 1968. Major Ollie E. Ison assumed duties as Executive Officer of the battalion on 15 June 1968; Captain David E. Holbrook was assigned duties as S-4 on 15 June 1968; Captain Martin J. Resick was assigned duties as S-3 on 15 June 1968. Captain James E. Hammock assumed command of Company D, 36th Signal Battalion on 19 June 1968. Captain Jesse C. Greene, Jr., assumed duties as battalion chaplain on 4 July 1968.

(3) During the reporting period, Brigadier General William Van Harlingen, Commanding General, 1st Signal Brigade, visited the battalion on two occasions; 15 May 1968 and 3 July 1968. Colonel Daniel McElwee, 21st Group Commander, visited the battalion on five occasions during the reporting period; 11 May 1968, 20 June 1968, 15 July 1968, and 11 and 12 July 1968. Brigadier

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General Willard Roper, Commanding General, 18th Engineer Brigade; Colonel Perley, IFFV Signal Officer; Colonel K.J. Sarchet, MACV J6, visited sites of the battalion in July 1968. In addition, Colonel Newton, Commanding Officer, Cam Ranh Bay Support Command, received an orientation and a tour of battalion sites on 25 July 1968.

(4) The 73rd Signal Battalion (Spt) was engaged in operations for the entire 92 day reporting period.

b. Activities:

(1) During the reporting period, the 73rd Signal Battalion (Spt) continually stressed the upgrading of communications, the improvement of physical security, and the beautification of the entire battalion area.

(2) On 19 June 1968, Company D, 36th Signal Battalion turned over personnel and equipment at Nha Trang West VNF site to the 459th Signal Battalion. This change realigned signal battalion boundaries for better operational control.

(3) All companies of the battalion eagerly spent long hours in order to beautify their areas. In several sandy areas, shrubs and plants bloomed where barren sand had stretched before. At Lang Bieu Mountain, vast improvements were made by Company E, 43rd Signal Battalion, in living conditions of the men. A new 150 man barracks was built, boardwalks were laid, and drainage was sharply improved. The supply room and orderly room were revamped for smoother operation. At Kraus Compound, the 362nd Signal Company instituted construction and renovation projects to benefit all compound personnel. At Dong Ba Thin, Company D, 36th Signal Battalion, settled into its newly acquired buildings and began to develop an excellent area. An electronic maintenance shop neared completion as the reporting period closed. At Cam Ranh Bay, HHD, 73rd Signal Battalion, and Company C, 41st Signal Battalion made major improvements in their living areas. Company C, 41st Signal Battalion, received approval for their Modified Table of Organization and Equipment in June 1968.

(4) During the reporting period, 16 people were recommended for Bronze Stars for meritorious service.

(a) During the month of May, six people received Bronze Star awards for meritorious service. The recipients were: Captain Brown, Captain Berner, MSG Hopkins, SSG Crow, SP/5 Kensinger, and 1/Lt O'Brien.

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(b) During the month of June, 23 members of the 262nd Signal Company received the Army Commendation Medal with "V" device for valorous action during the TET Lunar Offensive in Dalat. One Bronze Star for meritorious service was awarded to Major Hutchison, the battalion executive officer.

(c) During the month of July, Major Crawford was awarded the Silver Star for heroic actions during the TET offensive. SFC Pade and Captain Jenquin received the Bronze Star for meritorious service.

(5) The battalion's buddy program was implemented by Company E, 43rd Signal Battalion during the month of June. They assisted the 205th Area Operations Company (ARVN) in perfecting operating techniques on the AN/TPC-2A. The ARVN's were provided technical assistance as well as acquiring experience for themselves. Further work will consist of training the ARVN personnel in the ELM shop.

c. Personnel:

(1) The following is a current list of critical MOS's for this battalion:

<u>MOS</u>	<u>AUTHORIZED</u>	<u>ASSIGNED</u>	<u>PERCENT</u>
31M40	40	24	60.0
52B20	64	38	59.4
71B30	14	1	7.1

(2) The shortage of 31M40's and 52B20's has created hardships for some of the isolated sites of the battalion. Although cross-training has been employed, the operational effectiveness of some sites has been hampered by the lack of these MOS's. The critical lack of MOS 71B30 continues to create a severe hardship.

(3) During the last quarter, six of the shortage MOS's reported were eliminated. Proper requisitions have been submitted and fill information rosters, which reflect replacement MOS and month of arrival, have been received from USASTRATCOM. However, it appears that such replacements are directed to other units upon arrival in-country. Based on projected gains, the critical shortage of 52B20's seems to be eliminated. If projected gains are diverted, then it is suggested that personnel infusion programs be emphasized in all battalions. Based on projected gains, the critical shortage of MOS 31M40 will apparently persist during the next quarter.

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(4) MTO&E authorization for Company C, 41st Signal Battalion, and Company E, 43d Signal Battalion has been approved: emergency authorization for positions within the battalion personnel office is still pending. The actual strength of the battalion as compared against the authorized strength of the old TO&E is 106.2%. Without the approval of the MTO&Es for all units, this battalion cannot adequately perform its mission.

(5) The employment of five civilian personnel at the Cam Ranh Bay DCO frame has relieved the workload on the frame personnel and has supplied technical abilities geared to the maintenance of the frame. The training of four indigenous nationals as switchboard operators has partially relieved the overload on the switchboard operators at Cam Ranh Bay.

d. Operations: During the reporting period, many significant events and changes occurred that have improved the posture of communications within the battalion.

(1) On 8 June 1968, a 12 channel UHF system (PPW9A) was installed from Lang Bian Mountain to Kraus Compound. The system was used in support of Free World Forces operating in the area. Additional circuitry was needed from LBM to Dalat and the system was left in after the operation ended.

(2) On 28 July 1968, a 24 channel Tropo system was installed from Lang Bian Mountain to Ban Me Thout. This system is to replace two of the three VHF systems between these sites.

(3) On 25 May 1968, the 12 channel VHF system 77UHF2, was deactivated. Circuits on 77UHF2 were transferred to 77UH1C system. Equipment is being maintained in place for backup and alt-route purposes.

(4) On 5 June 1968, the 24 channel Tropo system PPT09, was deactivated. Equipment from Vung Chua Mountain was moved to Lang Bian Mountain. Equipment from An Khe was moved to Ban Me Thout. This equipment was used to install a 24 channel Tropo system from Lang Bian Mountain to Ban Me Thout.

(5) On 25 June 1968, the 24 channel Tropo system 77UT14 was deactivated. This equipment was laterally transferred to the 2nd Signal Group for further deployment.

(6) On 3 June, the outside plant in the city of Dalat was completed. The project consisted of the installation of 54,000 feet of multipair cable, ranging from 12 to 200 pairs. Telephone service and appearance of the outside plant has been greatly improved.

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(7) The rehabilitation of Dong Ba Thin outside plant was completed on 4 June 1968. The installation consisted of installing 1,000 pairs of multipair cable by means of a 600 pair and a 400 pair cable to the MTE (MTC-1). A new cable head was constructed which now houses the 1,000 pairs. Approximately 2,000 feet of multipair cable was installed.

(8) The 330th Radio Research Detachment was provided better telephone and circuitry service through the installation of a 50 pair cable, running from the MTE at Dong Ba Thin to their site. The installation eliminated the field and drop wire. The project was completed on 16 June 1968.

(9) On July 11 1968, the installation of a 100 pair multipair cable was completed at Vinnel Corporation, Cam Ranh Bay. The installation provided Vinnel with the telephone service they required and somewhat relieved the congested cable (TK-1 tie cable) which serves that general area.

(10) The US Army Support Command, Cam Ranh Bay, is in the process of relocating its headquarters. In support of the headquarters, a 200 pair cable was installed in early July.

(11) From 11 July to 25 July 1968, the 73rd Signal Battalion was called upon to support Task Force South in Dalat, a project of IFFV. In supporting this semi-permanent site, the 73rd Signal Battalion was tasked to install secure teletype circuits, two 12 channel UHF systems (RPW7A & RPW8A), common user and sole user circuits. An SB-86 switchboard, wiring of telephones, and installation of cable necessary within the Dalat area were also provided. An AN/MSC-29 was installed to provide secure teletype circuits.

(12) On 25 July 1968, a crash alarm system was installed in the Cam Ranh Bay area. The purpose of this is to tie in all key commands for fast notification in the case of alerts or hostile activity.

(13) On 5 July 1968, the AB-216 tower at Hill 182 was reinforced by using four telephone poles as guide stakes in order to stabilize the tower and construct an additional twenty feet of tower for a more improved fresnel zone clearance between Hill 182 and Pr'Line.

(14) On 15 July, the AB-216 tower at Hill 180 (Phan Rang), was dismantled and a new concrete base poured and a new tower erected. Results are that the tower is now more stable and erosion around the base, due to rain, is prevented.

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(15) On 15 July 1968, a 54 foot tower was erected at Lang Pien Mountain to replace two 20 foot towers that existed previously. Results were that more space needed for antenna mounting became available. All antenna are now mounted on one good, stable tower.

(16) 15KW generators were used to replace 10KW generators at five site locations within the battalion. The reason for this change is due to a need for more reliable primary and backup power.

(17) On 15 June 1968, FM radios were installed at Bao Loc and Gia Nghia. This enables the commander to maintain necessary communications for command control purposes and system restoration to the two outlying sites.

(18) On 24 July 1968, AACOC completed the cutover from the SP-675 to the MSQ-73. Results are that all circuits are now located in one van and provides a more centralized control center for troubleshooting.

(19) During the reporting period, the 73rd Signal Battalion supported other units outside the battalion:

(a) Set telephone poles for the 10th Aviation Battalion and Support Command, Cam Ranh Bay.

(b) Assisted MACV by furnishing O5C radio operators for Bao Loc, Gia Nghia, Song Mao, Phan Rang, and Phan Thiet.

(c) Provided RFI support for Commanding Officer, Support Command Headquarters, Cam Ranh Bay.

(d) Provided crypto support to IEFV at Dalat.

(20) During the reporting period, the MARS station facility, Cam Ranh Bay, operated by Company C, 41st Signal Battalion, completed 2,868 calls.

(21) During the reporting period, Lang Pien Mountain (Company E, 43rd Signal Battalion) was selected for 21st Signal Group's quarterly site award; Bao Loc commcenter (Company E, 43rd Signal Battalion) won the 21st Signal Group's commcenter of the quarter award for the Farm Club league; and Phan Rang Beach (Company D, 36th Signal Battalion) and Navy Market Time DTE (Company C, 41st Signal Battalion) were awarded 21st Signal Group's certificate as outstanding sites.

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e. Training and Organization:

(1) Formal Schools:

(a) Formal school training has continued during this period in several critical MOS's: The Pulse Code Modulation Operator; AN/GPC-50 Radio Relay/Carrier; Circuit Restoral; Technical Facilities Controllers; and the Pulse Code Modulation Maintenance Course. It should be noted that at the present time, the authorized number of 72C's does not meet the battalion's requirements. The SEA Signal School does not offer a course of instruction for this MOS. To alleviate this MOS problem, and for continuity, a limited number of civilian local nationals have been hired and are presently receiving training.

(2) OJT and Cross-Training: On-the-job-training has been conducted in all MOS's. In particular, cross-training has proven to be mandatory for such jobs as patch panel operators, switchboard operators, technical controllers, and generator mechanics. Many personnel in the battalion now possess skills that are in addition to their primary MOS.

(3) Mortar training was conducted for sixteen personnel of the battalion at a week-long course taught by 3/506th Infantry Battalion personnel. Upon completion of the course, the sixteen men returned to Lang Bien and Pr'Line Mountains and formed the backbone of mortar crews at these locations.

(4) Mandatory Training: Mandatory training has been conducted with minimum disturbance during this quarter. Particular emphasis has been placed on safety and marijuana instruction. Training on new communications center procedures (JANAP 12A) has been intensified. All personnel have fired weapons for familiarization. A gas chamber exercise has been completed by three companies.

f. Intelligence:

(1) Physical Security:

(a) One of the battalion's foremost jobs during the reporting period was improvement of physical security, particularly at Lang Bien and Pr'Line Mountains.

(b) On Lang Bien Mountain, Company E, 43rd Signal Battalion, completely revamped their defensive bunkers by digging them deeper and improving roof support. Nine new bunkers were added. Interconnecting blast walls were built between bunkers for protection of personnel while moving,

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and fighting positions were emplaced in the blast walls at about every 10-15 meters. All claymore mines were rewired for double safety detonation. Lights have been added at the main gate. Reconstruction of concertina channels has begun and trip flares have been added in critical areas. Secondary vegetation is being continuously eliminated through use of manual labor. An expanded "clear zone" has been blasted from the perimeter through the use of explosives.

(c) At Long Bian Mountain and at Pr'Line Mountain, mortar pits have been rebuilt, aiming stakes have been set, storage facilities for ammo have been improved, and school-trained personnel comprise the working elements of the mortar crews.

(d) At Pr'Line Mountain, a reinforced command bunker has been completed and command control communications has been centralized in this bunker. Sandbag protection has been improved, and bunkers have been rebuilt in many parts of the perimeter. In addition, perimeter lighting is being revamped for improved reliability. The cutting of trees on the perimeter has continued to improve fields of fire.

(e) At several other sites, the battalion has spent long hours in defensive improvements. Phan Rang Hill 180 has been resandbagged and concertina has been restrung. The east side defensive bunkers of Dong Ba Thin have been rebuilt. At the rear of Kraus Compound, Dalat, a new security fence has been installed. Emergency defensive construction was undertaken at the Dalat West tactical site to insure that maximum security and protection are provided to all personnel.

(2) Enemy Activity:

(a) On 142000 May 1968, a jeep with two passengers of Company D, 36th Signal Battalion (Phan Thiet), was hit by 'K-47 rounds, resulting in one KIA.

(b) On 270035 May 1968, Kraus Compound, Dalat (362nd Signal Co. and Co.E, 43rd Signal Bn) came under mortar attack for approximately 30 minutes. Minor damage was done to two 2½ ton trucks, one 3/4 ton truck, and one 1/4 ton truck. Some buildings also received minor damage. There were three slightly wounded personnel.

(c) On 310830 May 1968, near Pr'Line signal site (362nd Signal Co.), a patrol of 194th MPs and RVN 407 Scout Company, were ambushed by an unknown number of VC while clearing Route 11 to Dalat for a convoy run. The VC used claymore mines and automatic weapons in the attack. The 194th had 1 KIA and 2 WIA; the 407th had 3 KIA and 7 WIA.

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(d) On 312130 May 1968, Kraus Compound, Dalat (362nd Signal Co. and Co.F, 43rd Signal Bn), received one B-40 rocket round. Minor damage was done to one billet, with no casualties.

(e) On 312345 May 1968, Kraus Compound, Dalat, came under small arms fire for approximately 15 minutes. There were no casualties.

(f) From 040215 to 040604 July 1968, Phan Rang Beach Site (Co.D, 36th Signal Bn) came under mortar attack. Several telephone lines were knocked out and some minor damage was done to buildings. There were no personnel casualties.

g. Logistics:

(1) The PLL program is receiving heavy attention and staff visits have solved and clarified many problems. Classes are planned for early August for additional training in running the PLL program.

(2) In an attempt to relieve the generator problems battalion-wide, eleven (11) 15KW, 50/60 cycle generators were drawn from Cam Ranh Bay Depot and distributed to three of the units in this battalion. Five more generators are on order.

(3) 45KW, 50/60 cycle generators remain a problem. No replacements are being received for the units being evacuated and the battalion currently has approximately twenty (20) of these generators on order. There is a possibility of obtaining 30KW's.

(4) The air-conditioner problems have been somewhat relieved by the arrival of thirty-one 18,000 BTU, trailer mounted air conditioners. These have been distributed to all of our units to reduce equipment heating problems.

(5) Company D, 36th Signal Battalion, experienced many logistical problems in the last quarter. It was necessary to establish a complete new PLL system. This required numerous requisitions in order to create the proper number of demands. It was discovered that a very small number of these requisitions were being filled and upon checking, it was found that when the items were received, they were being diverted to An Khe where the company was formerly located. This situation has been remedied and they are now receiving a normal flow of incoming items.

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(6) Co. E, 43rd Signal Battalion, Electronic Maintenance Shop has been completely renovated with the movement of all PLL shelves, work benches, administrative areas, and float equipment areas. This has increased the work area available and has facilitated the flow of equipment and records through the shop. Quality control systems were instituted whereby a piece of equipment is rack tested by a different repairman than the one who originated the repairs. A calibration team established its operation in the Company E EIM shop and many items were tested and calibrated.

(7) Logistical support to the Dalat area has greatly improved with the addition of convoys from Cam Ranh Bay and the increased usage of air transportation.

(8) The platoon from Company C, 87th Engineer Battalion, has accomplished a great deal this quarter toward improving conditions on Lang Binn Mountain, site of Company E, 43rd Signal Battalion. The access road has been completed except for the addition of several loads of rock. The roads within the perimeter have had approximately twenty (20) loads of rock spread on them. The 40' x 90' barracks has been completed and occupied. A barracks for maids was built by the platoon and has improved their personal comfort. All drainage work has been completed in order to decrease the erosion effect of the monsoons. Obtaining water will cease to be a problem upon installation of two 10,000 gallon tanks and four pumps. The engineers are also grading off an area for the storage of bulk supplies and any other materials which must be stored on LBM.

2. Section 2, Lessons Learned: Commander's Observations, Evaluations, and Recommendations:

a. Personnel: None

b. Operations:

(1) Installation of a TA-236 at Ba Gnoi

(a) OBSERVATION. It was required that a telephone be installed in the MACV Senior Advisor's office at Ba Gnoi which would eliminate the necessity of cranking a TA-312.

(b) EVALUATION. This was accomplished by installing a TA-236 wired into a TA-182 for ringing power. With this new setup, it only requires pushing a button on the TA-236 to reach Cam Ranh Bay.

(c) RECOMMENDATION. Use of this arrangement should be limited to high ranking individuals due to the excessive amount of equipment required.

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(2) Automatic Gain Control of AN/TRC-90B Vans

(a) OBSERVATION. A weekly check of the AGC (Automatic Gain Control) output from the power supply Q50-4H in the AN/TRC-90B configuration helps to reduce receiver outage.

(b) EVALUATION. A high AGC level causes a high negative potential on the control grid of V4 in the Q30-8 amplifier-converter oscillator unit. This accounts for the loss of the heterodyning process and eliminates the 70MHz output to the I.F. amplifier.

(c) RECOMMENDATION. The AGC should be adjusted as follows: Turn inject switch on power supply Q5-4A to OFF position. Connect a TS-352/U to J3 of power supply and adjust chopper balance control (R1) for a MINIMUM indication on the TS-352/U. Then disconnect the TS-352/U and turn the inject switch to the ON position.

(3) 4KHZ Pulse Generator on AN/TRC-90 Series

(a) OBSERVATION. Due to excessive heating on the 4KHZ Pulse Generator in the AN/TRC-90B configuration, frequency fluctuation has occurred.

(b) EVALUATION. Externally cooling the Pulse Generator prevents the two power transistors from going into a condition of thermal runaway.

(c) RECOMMENDATION. That the Pulse Generator should be put in an extender and externally cooled.

(4) IF Gain in AN/TRC-90 Vans

(a) OBSERVATION. It has been found that operators of the AN/TRC-90 series equipment are adjusting IF Gain (rec gain AN/TRC-90A) to compensate for poor receive signal strength.

(b) EVALUATION. IF gain should always be set on "6" regardless of receiver performance. This adjustment equalizes the noise in the receivers. Increasing the IF gain not only increases the signal level but gives an increase in noise.

(c) RECOMMENDATION. Do not adjust IF gain (rec gain) when there is an indication of low receive signal. Check wave guide for water, corrosion or unnecessary sharp bends, and check alignment of the antennas.

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(5) Adaptation of Cable Racks

(a) OBSERVATION. Small cables leading from antenna towers often form an unsightly and difficult to service mass of interwoven lines. An overhead cable rack, mounted on one side of the tower, has been used successfully to install such cables in a neat and orderly manner.

(b) EVALUATION. The use of cable racks allows antenna leads and multipair cables to be installed in a secure and orderly manner on the tower while permitting easy tracing of any one line.

(c) RECOMMENDATION. That antenna leads and multipair cables, when they follow a common path, be mounted by means of a cable rack or similar device.

(6) Use of Switchboard Cords

(a) OBSERVATION. It is the usual practice to replace worn switchboard cords indiscriminately. The resulting lack of color coding causes frequent errors during operation. When red, slate, and green cords, corresponding to the supervisory lights, were installed, erroneous disconnects were virtually eliminated.

(b) EVALUATION. Proper color coding of switchboard cords greatly improved the service provided by operators.

(c) RECOMMENDATION. When requisitioning replacements for switchboard cords, all efforts must be made to obtain cords not only of the proper type, but also of the proper color.

(7) System Outages Due to Commercial Power Failures

(a) OBSERVATION. The majority of all Vinnel power failures in the Cam Ranh Bay area occur in the late afternoon, during periods of intense thunder and lightning.

(b) EVALUATION. The outages caused by these power failures are approximately half of the total downtime incurred by the microwave detachments.

(c) RECOMMENDATION. When it appears that a storm is imminent, generators should be started in parallel. Generators should be switched on to avoid probable Vinnel power failures. This practice has reduced the outage time caused by power failures.

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(8) Lack of Fixed Station Equipment in Comm Center

(a) OBSERVATION. Fixed or semi-fixed commcenters, processing over 15,000 messages per month, are burdened with tactical teletype equipment.

(b) EVALUATION. Due to the large volume of messages, this tactical equipment does not stand up under the strain of such traffic.

(c) RECOMMENDATION. In view of the constant slippage of Class IV communications centers, fixed station equipment should be issued to the commcenters performing a fixed station function. This would facilitate a faster traffic flow and cut down on maintenance problems.

(9) Noise Problem in the PP690

(a) OBSERVATION. The OB-2 voltage regulator tube PP690 of the AN/TRC-29 was injecting noise into the PP690 power supply.

(b) EVALUATION. A 60 cycle sine wave was being injected into the plates of the receive tubes.

(c) RECOMMENDATION. By placing a 0.1 mfd capacitor-600V between pin 1 and pin 4 (ground), there is no effect on the plain OB-2 tube when in use, but does pass the oscillator to ground.

(10) Power Surge Outage in the PP690

(a) OBSERVATION. Tube 836 used in the power supply PP690 was very weak and could not withstand power surge.

(b) EVALUATION. The design of the tube is such that it will not hold up under present operation.

(c) RECOMMENDATION. Tube 1616, used in VHF equipment, will replace the 836 tube. The 1616 is stronger and will withstand more punishment than the 836.

(11) Faulty Spiral-4 Sections in VHF Vans

(a) OBSERVATION. A continued problem was experienced with one teletype circuit. The problem continued to recur without explanation. The circuit experienced outages which were difficult to trace. All efforts (change of channel, change of cable pair, change of equipment, direct wiring to channel) were in vain. Finally, after a Spiral-4 cable section between the AN/TCC-7 and R-417 of the VHF equipment was replaced, the circuit came back in.

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(b) EVALUATION. Although channels were clear for voice traffic during these outages, teletype was being distorted. After checking a drop in feedback at the AN/TCC-7, the Spiral-4 cable section was replaced and the circuit came back to traffic. It was unusual to find a cable section that passed voice traffic without distortion, but intermittently distorted teletype traffic.

(c) RECOMMENDATION. That all signal units be informed of this unusual problem for future reference or for resolution of similar problems.

(12) Cable Installation at Cam Ranh Bay

(a) OBSERVATION. Virtually all of the outside cable plant installed at Cam Ranh Bay during 1966-67 was emplaced underground. Numerous problems have since arisen from this particular type of installation. These include moisture inside cables resulting in shorts and crosstalk, cable damage during earth moving operations, and the lack of cable locating, repair and test equipment and materials without which a reliable cable plant is impossible.

(b) EVALUATION. Proper maintenance of buried cable is more difficult and much more critical than that of aerial cable. In view of the constant lack of equipment, materials, and experienced personnel for construction and maintenance of multipair telephone cable, aerial installation was found to be far more advantageous and, by far, less costly.

(c) RECOMMENDATION. That multipair cable be installed aerially in all cases except where buried installation is absolutely required due to tactical considerations.

(13) Crash Alarm Circuit

(a) OBSERVATION. The requirement existed for quickly contacting key headquarters in the Cam Ranh Bay area during alerts or other emergency situation. As much as thirty minutes had been required to contact these headquarters. When this problem came to the attention of the battalion wire office, the "Crash Alarm" system of the Dial Central Office (DCO) was suggested. Since nobody else was familiar with this feature, it had to be traced down through DCO records. In coordination with civilian DCO maintenance personnel, as well as prospective users, the crash alarm system was finally activated.

(b) EVALUATION. The crash alarm system provides a method of simultaneously contacting up to twenty telephone subscribers while employing already installed telephones. When properly used, it reduces the task of contacting these subscribers to a single telephone call.

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(c) RECOMMENDATION. That all DCO's check their facility for this rarely used, but most beneficial feature.

c. Training:

(1) Vietnamese Training

(a) OBSERVATION. There is a critical shortage of switchboard operators within this battalion.

(b) EVALUATION. During this reporting period, a program was established whereby Vietnamese Nationals are being hired to operate the switchboard on the day shift. When the program is completed, sixteen Vietnamese females will be working as proficient and fully qualified switchboard operators. Training Vietnamese is initially more difficult than the training of military personnel, with the special language and equipment familiarization problems. However, these disadvantages are far outweighed by the service these female operators will perform in filling a critical MOS gap, once they are properly trained.

(c) RECOMMENDATION. That Vietnamese personnel, wherever possible, be used to fill the shortage of switchboard operators.

d. Intelligence:

(1) Wiring of Claymore Mines

(a) OBSERVATION. In many instances, the wiring of claymore mines has been ineffective, especially in areas that receive large amounts of rainfall.

(b) EVALUATION. A new system of wiring, permitting a double-safety detonation device has been implemented for all claymore mines. Each sector is broken down into perimeter defensive postures composed of 3 lines in depth of claymore mines. Each line is broken into 2 sections providing capabilities of strategic detonation of any one of 6 strings of claymores. Each individual string is composed of 5-7 claymore mines spaced 10-15 meters apart. The string is wired with electrical detonation caps connected in series on each end of the string. The intermediary mines are wired with percussion detonation cord in a double looped line beginning and ending at each end claymore. This provides a system of 4 alternate means of detonation for each individual mine and reduces the possibility of non-detonation of any one of the entire string of mines to a mere 1 chance in 20, as opposed to the previous system of detonation which offered only reliability to the degree of 1 chance in 5. (See Inclosure 1)

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(c) RECOMMENDATION. Recommend this system be examined for use in all extremely wet areas.

(2) Records for Security Clearance

(a) OBSERVATION. During the last quarter there were a few instances where personnel reported without their records. In most cases, these individuals were being reassigned from Europe and were not permitted to hand carry their records; subsequently their records were either lost or delayed enroute.

(b) EVALUATION. An individual to be assigned to a position requiring a security clearance (i.e. a commcenter), is unable to be utilized pending arrival of his records so that his eligibility for a clearance can be determined. This causes undue hardship not only on the individual but also on the gaining unit which is more often than not in dire need of the subject replacement.

(c) RECOMMENDATION. That all personnel be permitted to hand carry their records, particularly when assigned to Vietnam, so that maximum utilization may be realized of an individual's services in a short tour area.

(3) Mortar Proficiency

(a) OBSERVATION. As a result of a physical security survey conducted by Headquarters, IFFV, at two isolated signal sites, it was revealed that a serious deficiency existed in trained mortar personnel and mortar employment.

(b) EVALUATION. At isolated sites, signal personnel are frequently required to man defensive positions in addition to their normal duties. Positioning and firing of mortars is one of the most important defensive requirements. Through inexperience, some mortars were positioned to fire over living quarters and administrative areas. This deficiency was corrected by sending personnel to a one week mortar training school conducted by heavy weapons personnel. In addition, a course of instruction on mortars was requisitioned and received from the Infantry School, Fort Benning, Ga.

(c) RECOMMENDATION. It is strongly recommended that selected personnel, being assigned to isolated signal sites, receive some type of formal training on mortar employment and firing and that continued command emphasis be placed on the training of mortar sections or fire direction center personnel.

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(4) Fortification of Bunkers

(a) OBSERVATION. In building bunkers, a problem has occurred with the deterioration of sandbags at the base of the bunkers.

(b) EVALUATION. Although sandbags are essential in the construction of bunkers, it has been found that where logs are available, they should be used to build bunkers and walls. This cuts down on the maintenance problem of replacing worn out sandbags. In addition, when bunkers are constructed, if supports are used in each corner, bunkers will not sag as quickly as they have in the past. It is also felt that plastic bags last longer for sandbagging in wet weather areas.

(c) RECOMMENDATION. That logs and plastic sandbags be used in bunker construction in order to reduce rebuilding jobs.

e. Logistics:

(1) Generator Failure

(a) OBSERVATION. This battalion received 11 new 15KV generators, 50/60 cycle. Four (4) of these eleven (11) generators have had serious malfunctions after running a short period of time. Some would not run at all. The most common fault is the actuator assembly. On two of the generators, metal filings or shavings were discovered inside the assembly, apparently left in at the factory. A third generator finally was placed in service after a thorough cleaning of this assembly and careful adjustment and cleaning of the fuel system, especially in the critical jets in the injector system. A fourth generator has been evacuated for higher echelon work when the injector pump, overspeed switch, actuator assembly and numerous factory wiring errors were discovered. Several additional generators have had "O" ring seals leak, but this is not a serious problem.

(b) EVALUATION. With a 36% failure rate for brand new generators, it is apparent that acceptance tests by the U.S. government are not being properly administered.

(c) RECOMMENDATION. That acceptance methods be inspected to determine if they are adequate. Also, that strict control of initial preparation for operation to insure clean hydraulic fluid is used and that no dirt or grease is allowed to contaminate the actuator assembly during preparation.

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(2) Wiring of the AN/MCC-6

(a) OBSERVATION. The internal wiring of one AN/MCC-6 located at Dong Pa Thin was defective to the point that it became necessary to externally hard wire all the equipment. This breakdown was caused by deterioration of insulation on internal wiring due to excess heat experienced here in Vietnam.

(b) EVALUATION. Investigation of the van in question supported the RFO reports. A replacement van was obtained through the "closed loop" program and installed. This problem exists in other equipment within this battalion.

(c) RECOMMENDATION. That more AN/MCC-6 shelters be included in the "closed loop" program to replace those with faulty wiring.

f. Organization:

MTO&E Status


(a) OBSERVATION. Company D, 36th Signal Battalion, a signal combat area company, has operated in three different locations since arriving in RVN in November 1966. The unit is under the TO&E 11-87E and submitted an MTO&E when it was in An Khe, but this modification no longer suits its needs.

(b) EVALUATION. In each location, a different type of organization is required. The TO&E 11-500D is the most flexible TO&E available to a signal combat area company. At the present time, a new MTO&E is being drawn up requesting a change from 11-87E to 11-500D.

(c) RECOMMENDATION. That all signal combat area companies in RVN operate under the TO&E 11-500D. Because of its flexibility, it can be tailored to fit any situation.

g. Other: None

2 Incl
as


OWEN J. DRIVER JR.
LTC, SigC
Commanding

DISTRIBUTION:

2 - Cinc, USARPAC
3 - CG, USRV
1 - CG, 1st Signal Brigade
1 - CO, USASTRATCOM-PAC
20 - CO, 21st Signal Group

SCCPV-NG-OPT (10 AUG 68) 1st Ind

SUBJECT: Operational Report of 73rd Signal Battalion For Period
Ending 31 July 1968, (CRCS CS FOR) (RI)

DA, HEADQUARTERS, 21ST SIGNAL GROUP, APO 96240

25 August 1968

TO: Commanding General, 1st Signal Brigade, ATTN: SCCPV-CP, APO 96304

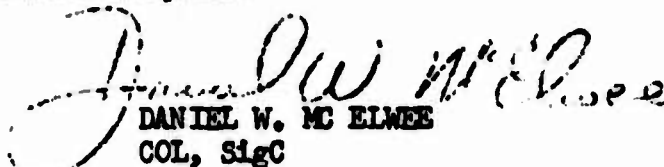
1. Transmitted herewith is one copy Headquarters, 73rd Signal
Battalion Report, Subject as above.

2. Concur in the commanders observations and recommendations with the
following comments and/or exceptions:

A. Reference Section 1, Para C (1), (2) and (3): 21st Signal
Group is presently experiencing an overall shortage in MOS 31M40 and
71B30. Internal readjustments with group have been made so that no
one unit is affected more than another. The July, 1968, known gains
and losses report of 73D Signal Battalion indicates that twelve (12) pe-
rsonnel in MOS 71B30 are on requisition for the next 90 days. Fill on
these requisitions should correct the present shortage affect.
Diversions of 52B personnel to group by 1st Signal Brigade in August,
1968, should alleviate some of the critical shortage in MOS 52B.

B. Reference Section 2, Para D (2) (B): Personnel may be granted
an interim clearance on a need to know basis and interim degree of
clearance required to perform mission immediately upon arrival. The
Commander will maintain a roster of these personnel and the degree of
clearance granted. This information was dissiminated to all battalions
by message.

2. This report is considered adequate.


DANIEL W. MC ELWEE
COL, SigC
Commanding

SCCPV-OP-1 (10 Aug 68) 2nd Ind.

SUBJECT: Operational Report of 73rd Signal Battalion for Period Ending
31 July 1968, ACS CSFOR-65 (R1).

DA, HQ, 1st Signal Brigade (USASTRATCOM), APO 96384 13 September 1968

TO: Commanding General, United States Army Vietnam, ATTN: AVHGC-D3T,
APO 96375

1. Subject report is forwarded in accordance with USARV Regulation 525-15.
2. This headquarters has reviewed the report and concurs in it as indorsed with the following comments and/or exceptions concerning referenced paragraphs:

a. Paragraph c, p.15. Insert "(1)" immediately preceding "Vietnamese Training".

b. Paragraph 2b (1), p.10. Nonconcur; the arrangement described constitutes an unauthorized modification of equipment and the operating unit has been directed to remove the modified equipment from the line and restore it to its original condition.

c. Paragraph 2b (3), p.11. Nonconcur; the use of an extender for cooling should be an emergency type procedure and not a standard practice since there is a strong possibility of accidental damage to the pulse generator when on the extender.

d. Paragraph 2b (4), p.11. Concur; IF gain should not be adjusted except when performing a complete IF alignment.

e. Paragraph 2b (8), p.13. Fixed station equipment is neither authorized nor available in sufficient quantities to provide all non-mobile COMSEC facilities. These facilities are continually considered for upgrading as equipment becomes available. Further, it is incumbent upon the unit to provide appropriate information for submission of a NTTR to obtain the required authorization.

f. Paragraph 2b (12), p.14. Nonconcur; the advantage gained through the capability of buried cable to survive in a combat environment far outweighs the problems inherent in cable burial construction. Proper installation, splicing, marking, and maintenance of adequate cable records will minimize problems with buried cable.

g. Paragraph 2c (1), p.15. Concur; Program 6 is the civilianization of military spaces. A course is now being set up at the US Army Training Facility - 1st Signal Brigade to train local nationals as switchboard operators. The course will be conducted from September 1968 thru May 1969.

NOT REPRODUCIBLE

AVHGC-DST (10 Aug 68) 3d Ind

MAJ Klingman/ds/LBN 4433

SUBJECT: Operational Report of 73rd Signal Battalion for Period Ending 31 July 1968, RCS CSFOR-65 (R1).

HEADQUARTERS, UNITED STATES ARMY, VIETNAM, APO San Francisco 96375

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-UT,
APO 96556

1. This headquarters has reviewed the Operational Report-Lessons Learned for the quarterly period ending 31 July 1968 from Headquarters, 73d Signal Battalion.

2. Comments follow:

a. Reference item concerning generator failure, page 17, paragraph 2e(1): Concur. The unit will be advised to submit an Equipment Improvement Recommendation (EIR).

b. Reference item concerning MTO&D status, page 18, paragraph f: Nonconcur with the recommendation. Company D, 36th Signal Battalion has an area communications support mission which can best be accomplished when organized under TOE 11-87. The reorganization of the 1st Signal Brigade which is planned for the near future, will include reorganizing this company under the GOLF series TOE. The proposed MTO&D mentioned in the reference should be based upon TOE 11-87G. The 11-500 series is normally used to provide certain capabilities, added to an existing authorization document and should not be used to form a company to perform the area communications support mission. This comment has been discussed with the 1st Signal Brigade.

FOR THE COMMANDER:


A.R. GUENTHER
CPT. AGC
ASST. ADJUTANT GENERAL

Cy furn:

HQ 1st Sig Bde (USASTRATCOM)

HQ 73d Sig Bn

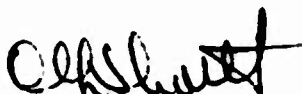
GPOP-DT (10 Aug 68) 4th Ind
SUBJECT: Operational Report of HQ, 73d Sig Bn for Period Ending
31 July 1968, RCS CSFOR-65 (R1)

HQ, US Army, Pacific, APO San Francisco 96558 14 NOV 1968

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters has evaluated subject report and forwarding indorse-
ments and concurs in the report as indorsed.

FOR THE COMMANDER IN CHIEF:

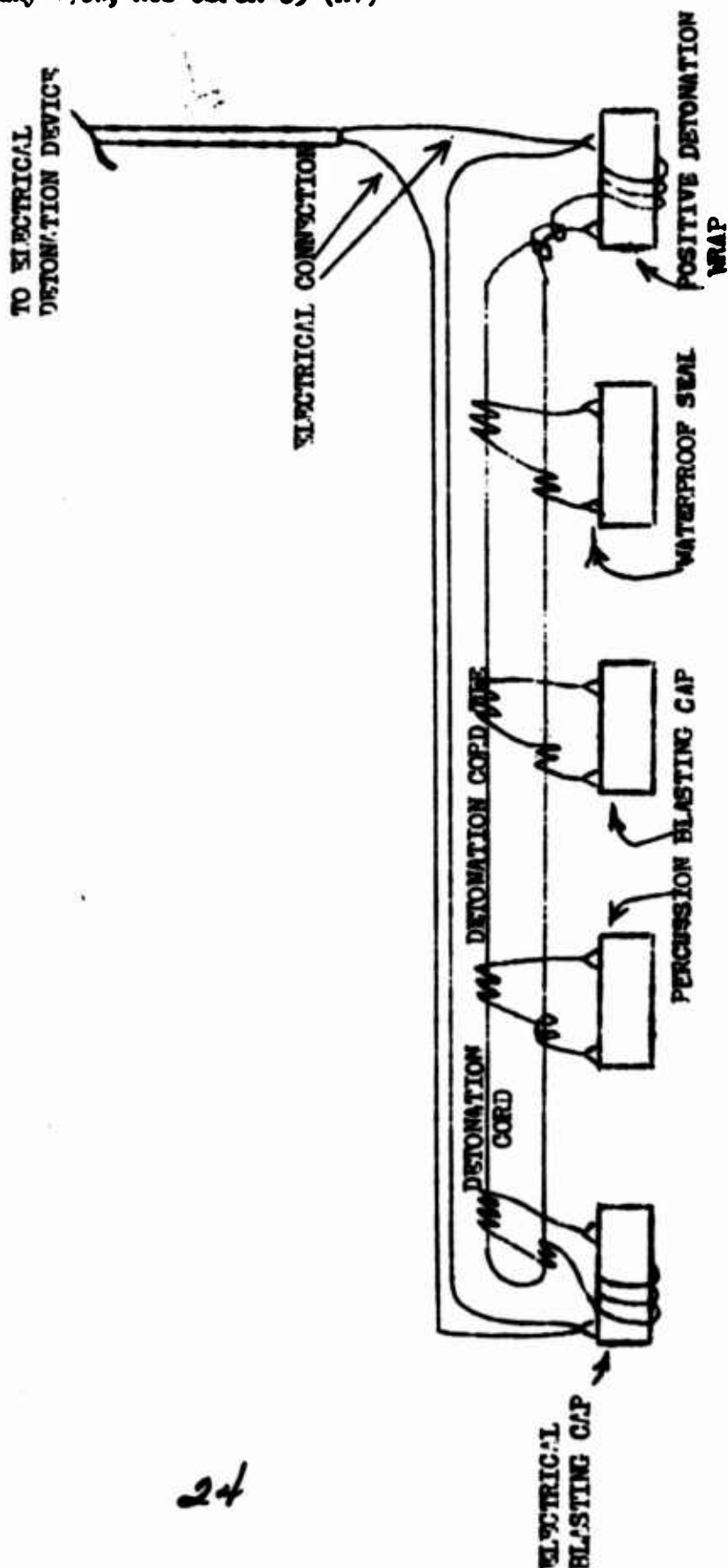


C. L. SHORTT
CPT, AGC
Asst AG

SCCPV-NG-SS-OP

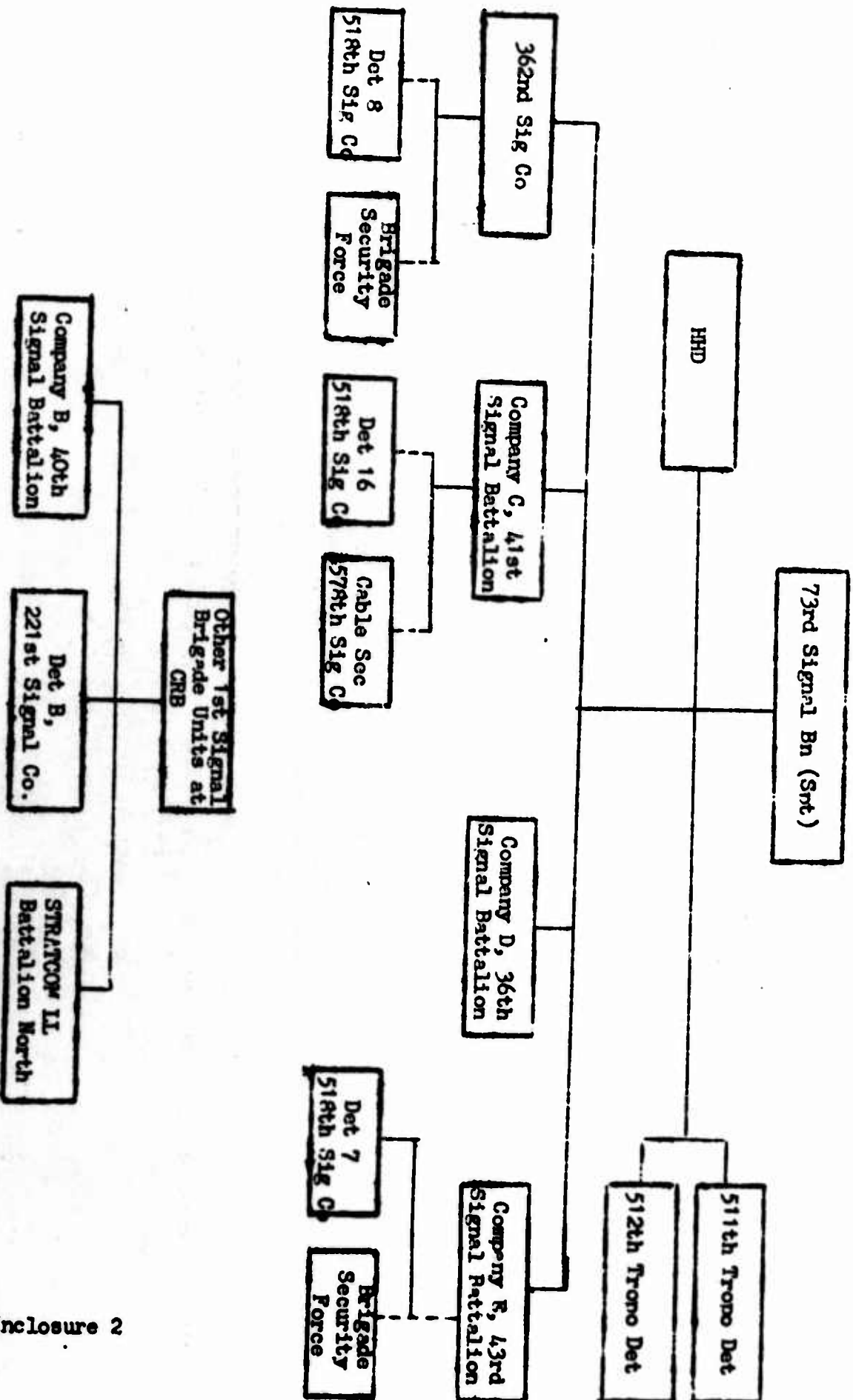
10 August 1968

SUBJECT: Operational Report of 73rd Signal Battalion (Spt) for Period
Ending 31 July 1968, RCS CSFOR-65 (R1)



Inclosure 1

ORGANIZATION CHART



UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

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4. DESCRIPTIVE NOTES (Type of report and inclusive dates) Experiences of unit engaged in counterinsurgency operations, 1 May - 31 Jul 68			
5. AUTHOR(S) (First name, middle initial, last name) CO, 73d Signal Battalion (Spt)			
6. REPORT DATE 10 August 1968		7a. TOTAL NO. OF PAGES 26	7b. NO. OF REFS
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13. ABSTRACT			

The following items are recommended for inclusion in the Lessons Learned Index:

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* SUBJECT TITLE _____
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ITEM 2

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ITEM 5

SUBJECT TITLE _____
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PAGE # _____

* Subject Title: A short (one sentence or phrase) description of the item of interest.

** FOR OT UT # : Appears in the Reply Reference line of the Letter of Transmittal. This number must be accurately stated.

***Page # : That page on which the item of interest is located.

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